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## Dermatitis Gangrenosa Infantum

### A REPORT OF A CASE

BY

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From time to time in African infants one meets a condition generally known to dermatologists as *dermatitis gangrenosa infantum*, in which a characteristic destruction of a large area of skin occurs. It may start with a small blister or it may begin *de novo*, being quickly followed by loss of skin and rapid spread. The affected skin assumes a blackened colour, is dull, opaque and usually sharply demarcated from the healthy surrounding skin. The dead skin is hard and the size of the lesion varies, but often it is extensive, measuring several inches across. Its shape too varies very much, although roughly circular, with many small projections and indentations. It usually has the appearance of an indented outline of a map, the normal skin representing the sea. The condition is said to be due to the *Haemolytic streptococcus* which can regularly be recovered from it. It is believed that an initial scratch or boil starts off the process, which develops in an alarming manner. It frequently, but not always, occurs in marasmic or undernourished children, often when recovering from one of the common infectious diseases.

#### ILLUSTRATIVE CASE

The patient was a male African infant, aged 1½ years, who was referred to the Salisbury African Hospital from Concession by Dr. John Miller-Cranko on the 23rd July, 1955, because of "blackening of the skin of the buttocks and thighs." The infant first developed abdominal pain and diarrhoea and the following day was taken to the Concession clinic, where treatment was prescribed. After a further three days it was noticed that the buttocks and the back of the thighs of the child had begun to swell, and after a further two days the area had assumed a black or "dead" colour. No blistering was observed. The original size of the lesion was maintained throughout the course of the illness.

The diet of the infant consisted mostly of maize, "a little meat" and few additions else except oranges. He had been weaned at the early age of 1½ months. The mother had given birth to eight children, of whom the first five had died in infancy, but none had shown this condition.

*On Examination.*—The patient was a well-covered male baby who was miserable and cried continually. The hair was dull and straightish. A few discrete small lymph glands were felt in the axillae and under the mandible on both sides, but those in the inguinal and femoral regions were much enlarged and tender. The extent of the area affected is demonstrated in the illustration (Fig. 1). The lesion was covered by a hard, black, leathery skin. The edge of the normal skin surrounding the blackened zone was sharply demarcated and slightly raised. There were several smaller islands of black patches towards the ankle and a small patch on the outer aspect of the right arm. A swab of the lesion was taken for bacteriological examination, but nothing of note was cultured. The Wassermann



Fig. 1—The extent of the gangrenous zone in each buttock is clearly shown.

reaction of the mother was negative. No amoebae were discovered in the stool. The urine was clear. An X-ray of the legs revealed normal bony detail. The total red cell count was 4.1 million per c.cm. and the haemoglobin 80 per cent. The total leucocyte count was 22,100, the differential count being: neutrophils 55 per cent., lymphocytes 42 per cent. and eosinophiles 3 per cent.

*Course of Illness.*—On admission the baby's temperature was 101° F. and it continued at this level for three days, after which it gradually returned to normal. Terramycin ointment was applied to the affected area and 250,000 units of penicillin were given twice daily by intramuscular injection. After several days the gangrenous areas began to separate, revealing red granulation tissue beneath, the line of demarcation being sharply defined. By the 27th

August, 1956, the area had healed, leaving a pale depigmented scar.

#### DISCUSSION

There is probably some association between gangrenous dermatitis seen in the African infant and cancrum oris and also possibly with Fournier's syndrome, in which a rapid loss and necrosis of the scrotal skin takes place. The sharply defined character of the lesion is a striking feature, almost as if the extent of the disease is determined by the blood being cut off by an arterial thrombosis. Onsy (1940) reports from Egypt a somewhat similar condition in which gangrene of the skin appears typically in the eyelids, breast and, most commonly of all, on the scrotum. It is seen at the end of the winter and during spring and coincides with the harvest and tilling of the land. It starts usually as an acute dermatitis with much oedema and enlargement of the neighbouring lymph glands, after which the skin darkens, becomes black and ultimately gangrene sets in. At the same time the subcutaneous tissues show extensive coagulative necrosis. Onsy isolated a small gram-negative coccobacillus which he regarded as the causative agent.

Gangrenous dermatitis is also recorded in the adult, and Lautre (1933) describes a case from South Africa in a European female aged 32 with acute haemolytic streptococcal gangrene of the skin of the right leg and foot. In the adult it

usually starts suddenly, with pain, redness and swelling, and soon a fulminating form of cellulitis follows.

The lesion generally originates from some trivial wound, with bullae forming at the site. The constitutional disturbances are marked, with a high fever and a rapid pulse. The bullae coalesce to form eventually a large area of gangrenous skin. At the end of a week the condition becomes stationary, with a sharp line of demarcation appearing around the patch of gangrene. Lautre considers the condition to be due to invasion of the skin by the *Haemolytic streptococcus* leading to early thrombosis and gangrene. The deeper cellular planes escape.

#### SUMMARY

A case of *dermatitis gangrenosa infantum* is described in an African infant. Its cause is unknown, but it is probably related to cancrum oris and other like conditions which are more commonly met with in the undernourished.

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